

## **Gas Container**

### **Field of Invention**

The present invention relates to a gas container.

### **Background of Invention**

Referring to Figure 1, a gas container 1 includes a bag 4 and a mouth 2.

The mouth 2 is made of polyoxymethylene so as to exhibit adequate rigidity. Since polypropylene does not dissolve in alkane and prevents aluminum from oxygenation, an inmost layer 3 of the bag 4 is made of polypropylene. However, gas often leaks between the mouth 2 and the inmost layer 3 of the bag 4 because of poor connection between them.

The present invention is therefore intended to obviate or at least alleviate the problems encountered in prior art.

### **Summary of Invention**

The primary objective of the present invention is to provide a gas-tight container.

According to the present invention, a gas container includes a bag, a mouth and a connector. The bag defines a space for storing gas and an aperture for passing the gas. The mouth includes a first end for connection with a valve and a second end inserted in the aperture. The connector is located between the bag and the second end of the mouth.

1    **Brief Description of Drawings**

2    The present invention will be described through detailed illustration of  
3    embodiments referring to the drawings.

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5    Figure 1 is a cutaway view of a conventional gas container.

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7    Figure 2 is a perspective view of a gas container according to a first  
8    embodiment of the present invention.

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10   Figure 3 is an exploded view of the gas container of Figure 2.

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12   Figure 4 is a cutaway view of the gas container of Figure 2.

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14   Figure 5 is an exploded view of a gas container according to a second  
15   embodiment of the present invention.

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17   **Detailed Description of Embodiments**

18   Referring to Figures 2~4, according to a first embodiment of the present  
19   invention, a gas container 10 includes a bag 20, a mouth 30 and a  
20   connector 40.

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22   Referring to Figure 3-4, the bag 20 defines a space 21 for storing gas and  
23   an aperture 22 for passing the gas. Accordingly, the aperture 22 is  
24   communicated with the space 21. The bag 20 includes a first layer 23  
25   (“outmost layer”), a second layer 24, a third layer 25 and a fourth layer 26  
26   (“inmost layer”). The first layer 23 is made of polyethylene

1 terephthalate, which is adequately waterproof. The second layer 24 is  
2 made of aluminum that provides adequate strength. The third layer 25 is  
3 made of polyamide that provides adequate tenacity and absorbs water.  
4 The fourth layer 26 is made of polypropylene. The polypropylene does  
5 not dissolve in alkane and prevents the second layer 24 made of  
6 aluminum from oxygenation.

7  
8 The mouth 30 is made of polyoxymethylene. The mouth 30 includes a  
9 first end and a second end. A valve (not shown) is installed in the first  
10 end of the mouth 30. The second end of the mouth 30 is inserted in the  
11 aperture 22 of the bag 20. A plurality of ribs 32 is formed on the second  
12 end of the mouth 30. An aperture 33 is axially defined in the mouth 30.

13  
14 The connector 40 is located between the inmost layer 26 of the bag 20  
15 and the second end 32 of the mouth 30. The connector 40 is made of  
16 polyamide. Polyamide and polypropylene can be bounded together  
17 tightly when they are subject to heat. Polyamide and polyoxymethylene  
18 can be bounded together tightly when they are subject to heat. Hence,  
19 the connector 40 forms a good connection between the inmost layer 26 of  
20 the bag 20 and the second end of the mouth 30 after they are heat pressed.  
21 Furthermore, the ribs 32 enhance the gas-tight connection of the mouth 30  
22 with the connector 40.

23  
24 Figure 5 shows a gas container according to a second embodiment of the  
25 present invention. The second embodiment is identical to the first  
26 embodiment except that the connector 40 is replaced with a fifth layer 27

1 (“inmost layer”) of the bag 20. The fifth layer 27 is made of polyamide.

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3 The present invention has been described through detailed illustration of  
4 two embodiments. Those skilled in the art can derive variations from  
5 the embodiments without departing from the scope of the present  
6 invention. Therefore, the embodiments shall not limit the scope of the  
7 present invention defined in the claims.

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